

(7 pages)

Reg. No. : .....

**Code No. : 7792**

**Sub. Code : WCSM 13**

M.Sc. (CBCS) DEGREE EXAMINATION,  
NOVEMBER 2023.

First Semester

Computer Science — Core

**PYTHON PROGRAMMING**

(For those who joined in July 2023 onwards)

Time : Three hours

Maximum : 75 marks

**PART A — (15 × 1 = 15 marks)**

Answer ALL questions.

Choose the correct answer :

1. How do you access the first element of a list in Python?  
(a) list[0]                      (b) list(0)  
(c) list[1]                      (d) list.first
2. Which of the following is a Python tuple?  
(a) {1, 2, 3}                      (b) {}  
(c) [1, 2, 3]                      (d) (1, 2, 3)

3. In a Python dictionary, what are the elements comprised of?  
(a) Paris of keys and values  
(b) Only keys  
(c) Only values  
(d) Numbers
4. Which of the following statements allows you to handle multiple conditions sequentially?  
(a) For                      (b) Else  
(c) Elif                      (d) While
5. What is the output of the following code?  

```
list 1 = [1, 2, 3, 4, 5]  
for i in range (len(list1)):  
    print(list1[i])
```

  
(a) 1, 2, 3, 4, 5                      (b) [1, 2, 3, 4, 5]  
(c) [1, 3, 5]                      (d) [0, 1, 2, 3, 4]
6. Which of the following is a correct way to define a user-defined exception in Python?  
(a) class MyException(Exception)  
(b) define MyException(Exception)  
(c) class MyException()  
(d) exception MyException(Exception)

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7. In Python, what is a package?  
(a) A standalone program  
(b) A collection of modules  
(c) A built-in Python function  
(d) A Python class
8. What keyword is used to define a class in Python?  
(a) Class (b) Def  
(c) Object (d) Instance
9. Which of the following is not a type of method in Python classes?  
(a) Instance methods (b) Static methods  
(c) Dynamic methods (d) Class methods
10. Which data type is used to represent text in Python?  
(a) Int (b) Str  
(c) Binary (d) Float
11. Which of the following is not a common web service format?  
(a) HTML (b) XML-RPC  
(c) JSON-RPC (d) Python

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12. Which of the following is a popular Relational Database Management System (RDBMS)?  
(a) MongoDB (b) Cassandra  
(c) MySQL (d) Redis
13. Which of the following is not a common approach to achieving concurrency in software?  
(a) Processes (b) Threads  
(c) Events (d) Sequential execution
14. Which of the following is not a type of concurrency mechanism in Python?  
(a) Threads (b) Multiprocessing  
(c) Coroutines (d) Queues
15. Which of the following is not a well-known Internet Service Protocol?  
(a) HTTP (b) FTP  
(c) SMB (d) SMTP

PART B — (5 × 4 = 20 marks)

Answer ALL questions, choosing either (a) or (b).

16. (a) Differentiate between local and global variable with example.  
Or  
(b) Explain the different ways to compare strings in python.

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[P.T.O.]





17. (a) Illustrate the *if else* statement with flowchart.

Or

- (b) Develop a program to print N numbers iteratively using function.

18. (a) State the benefits of using inheritance in python.

Or

- (b) Examine the advantages and disadvantages of using packages in python.

19. (a) Web is a client server system? Justify your answer.

Or

- (b) Analyze the python's standard web libraries.

20. (a) Differentiate between zeroMQ and web socket.

Or

- (b) Describe the different modes for opening a file and closing a file.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

21. (a) Describe the different ways to perform operations on *sets* in python.

Or

- (b) Create a python code to find the largest number in a list.

22. (a) Explain *for loop* and *while loop* with an example.

Or

- (b) Develop a program to catch a divide by zero exception.

23. (a) Create a python program to import a module and use its functions.

Or

- (b) Classify the different way to access and modify the attributes and methods of an object.



24. (a) Explain the different ways to read and write a file.

Or

- (b) How can you connect to and interact with a NoSQL data store from python? Discuss.

25. (a) Compare and contrast internet services and web services.

Or

- (b) Explain global interpreter lock and how does it affect threads.
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